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10/524,055	03/09/2005	Juha-Pekka Koskinen	089229.00048	4444

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EXAMINER

AJIBADE AKONAI, OLUMIDE

ART UNIT	PAPER NUMBER
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2617

MAIL DATE	DELIVERY MODE
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10/05/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/524,055

Applicant(s)

KOSKINEN ET AL.

Examiner

Olumide T. Ajibade-Akonai

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 3-7, 12-14, 16-23, 27 and 28 are rejected under 35 U.S.C. 102(e) as being anticipated by **Barna et al 6,999,449 (hereinafter Barna)**.

Regarding **claims 1 and 28**, Barna discloses a method comprising a computer program product embodied on a computer readable medium, and encoding instructions for performing, when executed on a computer: establishing an accounting session (steps 22-35, see fig. 1, col. 6, lines 19-48) between a network element (access server PDSN 12, see fig. 1, col. 6, lines 34-48) and a charging function (accounting server 18, see fig. 1, col. 6, lines 8-11) for the session (steps 34-35, see fig. 1, col. 6, lines 43-47), wherein the network element comprises a gateway (access server PDSN 12, see fig. 1, col. 6, lines 34-48) of an internet protocol based communication system (IP network or internet 13, see fig. 1, col. 3, lines 1-8); initiating a change in the accounting session on the initiation of the charging function (step 41-46, col. 6, lines 51-67, col. 7, lines 1-13), and charging for services in the communication system based on the accounting session (see fig. 1, col. 7, lines 5-13), wherein the initiating a change in the accounting

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session comprises transmitting a request to update the accounting session (accounting response, step 41, see fig. 1, col. 6, lines 58-67, col. 7, lines 1-3) from the charging function to the network element (in response to accounting request stop message to the prepaid server PPS at step 37, the PPS calculates a new volume W allowed by the subscriber, and based on the new volume, and threshold w , an accounting response message to start new accounting session is sent to the PDSN 12 at step 41, see fig. 1, col. 6, lines 51-67, col. 7, lines 1-8).

Regarding **claim 3**, as applied to claim 1, Barna further discloses wherein the transmitting the request comprises transmitting an update accounting request message (in response to accounting request stop message to the prepaid server PPS at step 37, the PPS calculates a new volume W allowed by the subscriber, and based on the new volume, and threshold w , an accounting response message to start new accounting session is sent to the PDSN 12 at step 42, see fig. 1, col. 6, lines 51-67, col. 7, lines 1-8).

Regarding **claim 4**, as applied to claim 1, Barna further discloses responsive to the request, implementing, in the network element a change in the charging of the accounting session (steps 42-46, see fig. 1, col. 6, lines 51-67, col. 7, lines 1-13).

Regarding **claim 5**, as applied to claim 2, Barna further discloses responsive to the request, transmitting, by the network element (access server PDSN 12, see fig. 1, col. 6, lines 34-48), an acknowledgement (see step 45-46, fig. 1, col. 7, lines 4-18) to the charging function (see fig. 1, col. 7, lines 5-8).

Regarding **claim 6**, as applied to claim 5, Barna further discloses wherein the transmitting the acknowledgement comprises transmitting an update accounting acknowledge message (see step 42, fig. 1, col. 7, lines 4-8).

Regarding **claim 7**, as applied to claim 1, Raman et al further discloses configuring the network element is a controller of a communications session relating to the accounting session (access server PDSN 12, see fig. 1, col. 6, lines 34-48).

Regarding **claim 12**, as applied to claim 1, Barna further discloses associating the accounting session with a pre-paid charging function (pre-paid server PPS 15, see fig. 1, col. 6, lines 9-10).

Regarding **claim 13**, as applied to claim 1, Barna further discloses configuring the internet protocol based communication system to support a Diameter internet protocol (see col. 7, lines 32-40).

Regarding **claims 14 and 27**, Raman et al further discloses a charging element (accounting server 18, see fig. 1, col. 6, lines 8-11), comprising: a monitoring unit and means (pre-paid server PPS 15, see fig. 1, col. 6, lines 9-10) to monitor charging (see fig. 1, col. 6, lines 9-18) in an internet protocol based communication system (IP network or internet 13, see fig. 1, col. 3, lines 1-8); an establishment unit and means configured to establish an accounting session with an application (AAA server 14, see fig. 1, col. 6, lines 8-9, 19-33); an information unit and means (AAA server 14, see fig. 1, col. 6, lines 8-9, 19-33) configured to inform a network element (access server PDSN 12, see fig. 1, col. 6, lines 34-48) configured to control an associated communication session of the accounting session (accounting response message, step 32, see fig. 1,

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col. 6, lines 34-42), wherein the network element comprises a gateway (access server PDSN 12, see fig. 1, col. 6, lines 34-48) of the internet protocol based communication system (IP network or internet 13, see fig. 1, col. 3, lines 1-8); an initiation unit and means (pre-paid server PPS 15, see fig. 1, col. 6, lines 9-10) configured to initiate a change in the accounting session, wherein the initiation unit comprises a transmission unit configured to receive a request to update the accounting session (steps, 35-45, see fig. 1, col. 6, lines 51-67, col. 7, lines 1-8).

Regarding **claim 16**, as applied to claim 14, Barna further discloses wherein the request comprises an update accounting request message (step 42, see fig. 1, col. 7, lines 4-7).

Regarding **claim 17**, as applied to claim 14, Barna further discloses wherein the initiation unit is configured to implement a change in the charging of the accounting session responsive to the request (see fig. 1, col. 7, lines 1-18).

Regarding **claim 18**, as applied to claim 14, Barna further discloses wherein the network element is configured to transmit an acknowledgement to the charging function responsive to the request (see steps 45-46, fig. 1, col. 7, lines 4-18).

Regarding **claim 19**, as applied to claim 18, Barna further discloses wherein the acknowledgement comprises an update accounting acknowledge message (see col. 7, lines 1-18).

Regarding **claim 20**, as applied to claim 14, Barna further discloses wherein the network element comprises a controller of the associated communications session (access server PDSN 12, see fig. 1, col. 6, lines 34-48).

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Regarding **claim 21**, as applied to claim 14, Barna further discloses wherein the communication system is configured to support a Diameter Internet protocol (see col. 7, lines 32-40).

Regarding **claim 22**, as applied to claim 21, Barna further discloses wherein the request signal is configured to be transmitted using a diameter Internet protocol (see col. 7, lines 32-40).

Regarding **claim 23**, as applied to claim 21, Barna further discloses wherein the element is configured to transmit an acknowledgement to the charging function responsive to the request (see col. 7, lines 1-18), wherein the acknowledgement signal is transferred using a Diameter IP protocol (see col. 7, lines 32-40).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Barna et al 6,999,449 (hereinafter Barna)** in view of **Raman et al 6,829,473**.

Regarding **claim 8**, as applied to claim 1, Barna discloses the claimed invention except wherein the establishing an accounting session comprises establishing an accounting session between the charging function and a further network element.

In the same field of endeavor, Raman et al further discloses wherein the establishing an accounting session comprises establishing an accounting session between the charging function (HAAA 191, see-figs. 12-14) and a further network element (PDSN 185 sends a Diameter Auth-request to HAAA 9191, see figs. 12 and 13, col. 37, lines 30-40).

It would therefore have been obvious skill in the art at the time the invention was made to combine the teaching of Raman et al into the system of Barna for the benefit of providing support a pre-paid billing wireless service on a data network when a user roams from one wireless network area to another.

Regarding **claim 9**, as applied to claim 8, Barna, as modified by Raman et al discloses the claimed invention.

Raman et al further discloses establishing an accounting session between an application for the accounting session (PDN 193, see fig. 12, col. 35, line 47) and the charging function (communications are exchanged between the PDN 193 and HAAA 191 using the Diameter protocol, see col. 35, lines 47-52).

It would therefore have been obvious skill in the art at the time the invention was made to further modify the combination of Barna and Raman et al for the benefit of providing support a pre-paid billing wireless service on a data network when a user roams from one wireless network area to another.

Regarding **claim 10**, as applied to claim 8, Barna, as modified by Raman et al discloses the claimed invention.

Raman et al further discloses establishing an accounting session between a control function for the accounting session (PCF 174 connected to home PDSN 178, see figs. 12-14, col. 36, line 13) and the charging function (PDSN 178 may directly communicate with HAAA 191, see fig. 12, col. 35, lines 59-67).

It would therefore have been obvious skill in the art at the time the invention was made to further modify the combination of Barna and Raman et al for the benefit of providing support a pre-paid billing wireless service on a data network when a user roams from one wireless network area to another.

Regarding **claim 11**, as applied to claim 9, Barna, as modified by Raman et al discloses the claimed invention.

Raman, however, further discloses wherein the initiating the change in the accounting session between the network element controlling the session and the charging function is responsive to a change in the at least one session of the accounting session between the charging function and a further network element or the accounting session between an application for the accounting session and the charging function (see col. 4, lines 15-33, col. 37, lines 10-34).

It would therefore have been obvious skill in the art at the time the invention was made to further modify the combination of Barna and Raman et al for the benefit of providing support a pre-paid billing wireless service on a data network when a user roams from one wireless network area to another.

5. Claims 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Barna et al 6,999,449 (hereinafter Barna)** in view of **Chaney 6,9479,724**.

Regarding **claim 24** Barna discloses a communication system (see fig. 1) comprising: a network element (access server PDSN 12, see fig. 1, col. 6, lines 34-48) configured to control a session for the provision of services in an internet protocol based communication system (IP network or internet 13, see fig. 1, col. 3, lines 1-8), wherein the network element comprises a gateway of the internet protocol based communication system (access server PDSN 12 connects to the Internet 13, indicating that it has a gateway/gateway functionality, see fig. 1, col. 6, lines 34-48); and a charging function (accounting server 18, see fig. 1, col. 6, lines 8-11), wherein at least one accounting session is configured to be established between the charging function and at least one of the network element, the application or the control function (see steps 21-33, col. 6,

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lines 19-45), and wherein the charging function is configured to initiate a change in the at least one accounting session by transmitting a request to update the accounting session to network element (in response to accounting request stop message to the prepaid server PPS at step 37, the PPS calculates a new volume W allowed by the subscriber, and based on the new volume, and threshold w, an accounting response message to start new accounting session is sent to the PDSN 12 at step 41, see fig. 1, col. 6, lines 51-67, col. 7, lines 1-8).

Barna does not specifically disclose an application for the session and a control function for the session.

In the same field of endeavor, Chaney discloses communication system (see fig. 1, col. 3, lines 58-60) comprising an application for the session (PIM, see fig. 4, col. 4, lines 15-18) and a control function for the session (MGCF or CSCF, see fig. 4, col. 3, lines 62-67, col. 4, lines 1-31).

It would therefore have been obvious to one of ordinary skill in the to combine the teaching of Chaney, by having a network with a call state control function and a CSCF and presence and instant messaging server, into the system of Barna for the benefit of providing the caller/calling party access to a data network.

Regarding **claim 25**, as applied to claim 24, Barna further discloses wherein charging of the charging function comprises pre-paid charging (pre-paid server PPS 15, see fig. 1, col. 6, lines 9-10).

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6. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Barna et al 6,999,449 (hereinafter Barna)** in view of **Chaney 6,9479,724** as applied to claim 24 above, and further in view of **Raman et al 6,829,473**.

Regarding **claim 26**, as applied to claim 24, the combination of Barna and Raman et al discloses the claimed invention except further comprising a plurality of accounting sessions, wherein the charging function initiates a change in one accounting session of the plurality of accounting sessions responsive to a change in another accounting session of the plurality of accounting sessions.

In the same field of endeavor, Raman et al further discloses a plurality of accounting sessions (PDSN 178 can communicate with HAAA 191 and BAA 201), wherein the charging function (BAAA 201) initiates a change in one accounting session (a PPP 45 session is 182 is negotiated between the PDSN 178 and the wireless mobile node 78 for a pre-paid billing session, and an Auth-Request message is sent to the HAAA 191 or BAAA 201, see figs. 12 and 14, col. 36, lines 12-26) of the plurality of accounting sessions responsive to a change in another accounting session of the plurality of accounting sessions (BAAA perform accounting procedures such as replenishing credits and purchasing new credits for prepaid services, and the measurement parameters that specifies each credit of the block of credit changes, see col. 38, lines 8-20, 46-63).

It would therefore have been obvious skill in the art at the time the invention was made to combine the teaching of Raman et al into the system of Barna

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and Chaney for the benefit of providing support a pre-paid billing wireless service on a data network when a user roams from one wireless network area to another.

Response to Arguments

7. Applicant's arguments filed 16 July 2007 have been fully considered but they are not persuasive. Regarding claims 1, 14, 24, 27, and 28, applicant asserts that Barna fails to disclose or suggest "initiating a change in the accounting session on the initiation of the charging function", and "wherein the initiating a change in the accounting session comprises transmitting a request to update the accounting session from the charging session to the network element". The examiner respectfully disagrees. Barna discloses the PDSN beginning a new accounting session with the accounting server (message 42, see fig. 1, col. 7, lines 4-6). The accounting start message 42 transmitted from the PDSN to the accounting server to begin a new accounting session is in response to a accounting message received from the received from the accounting server AAA 14 (see fig. 1, col. 6, lines 59-67, col. 7, lines 1-3). The message 41 transmitted to the PDSN 12 leads to a change in the accounting session between PDSN 12 and the accounting server. Messages 41 and 42 therefore broadly read on claimed limitations "initiating a change in the accounting session on the initiation of the charging function", and "wherein the initiating a change in the accounting session comprises transmitting a request to update the accounting session from the charging session to the network element" respectively. Claims 1, 14, 24, 27, and 28 stand rejected. Claims 2-13, 15-23, 25, and 26 stand rejected based on their dependence on claims 1, 14, and 24.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olumide T. Ajibade-Akonai whose telephone number is 571-272-6496. The examiner can normally be reached on M-F, 8.30p-5p.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rafael Perez-Gutierrez can be reached on 571-272-7915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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